

OUTCOME 3: INCREASED HARVEST LEVELS OF HARD CLAMS AND OTHER ESTUARINE SHELLFISH



Historically, hard clams and other shellfish have been a highly significant and abundant resource in the Reserve. Since the 1970s, hard clam populations, in particular, have declined dramatically. To restore shellfish populations in the estuary, it is necessary to further knowledge of their current distribution and advance cooperative efforts to increase the number of individuals reproducing in the bays.

Assessment of Shellfish Populations

Shellfish population assessments are critical to development of sustainable shellfish management programs. Shellfish surveys have been conducted in the Reserve by the NYS Department of Environmental Conservation (DEC); the Towns of Hempstead, Oyster Bay, Brookhaven, and Southampton; and The Nature Conservancy (TNC).

Programs to Increase Shellfish Populations

Shellfish seeding - the release of juvenile shellfish into appropriate habitat - has the potential to increase shellfish populations in the estuary. Grow-out of seed to a size which confers significantly higher survival rates is an important shellfish management strategy. Spawner sanctuaries are areas stocked with large, mature shellfish to enhance fertilization of eggs and are sited to increase larvae in areas capable of sustaining good growth and high densities of clams. Reserve partners have completed various projects to augment shellfish populations through increased seed placement, grow-out, and creation of spawner sanctuaries:

- The Town of Hempstead operates a hard clam seed grow-out program and seeds clams in open certified shellfish harvesting areas in Town waters.
- The Town of Oyster Bay operates three floating upwell streams, which are shellfish nurseries into which ten drums of sand-particle sized clams are placed. Each year between 2003 and 2005, 100,000 seed clams were placed in South Oyster Bay.
- The Town of Babylon has continued its grow-out program as funding has permitted, placing a minimum of 1 million seed clams into Great South Bay each fall.
- The Town of Brookhaven completed an evaluation of potential spawner sanctuary sites, and proposed sites along the inter-coastal waterway buoy line.
- The Town of Southampton completed an aquaculture feasibility study for Shinnecock Bay.

- TNC established and monitors spawner sanctuaries in Quantuck Bay and Shinnecock Bay. TNC also supports shellfish nursery programs, including the restoration of bay scallop populations, and has released over 30,000 bay scallops in Great South Bay and Shinnecock Bay.
- Cornell Cooperative Extension initiated SPAT (Southold Project in Aquaculture Training) programs on the south shore, through which volunteers help produce shellfish to seed bays. Local residents are trained to grow young shellfish at their own waterfront or in SPAT community gardens until they reach adult size and are released into local creeks and bays.

BLUEPOINTS BOTTOMLANDS HABITAT RESTORATION

In 2003, The Long Island Chapter of The Nature Conservancy (TNC) announced the donation of more than 11,500 acres of bay bottom in Great South Bay that were formerly owned by the Bluepoints Oyster Company. TNC has initiated an unprecedented conservation project to restore this once highly productive shellfish habitat and foster increased knowledge and understanding of the Great South Bay's marine ecosystem.



Volunteers prepare to place hard shell clams in Great South Bay

TNC now owns a total of 13,000 acres of bay bottomlands, covering approximately 25% of Great South Bay. To help determine a strategy for the long-term management and stewardship of its underwater property, TNC formed the Bluepoints Bottomlands Council (BBC). The BBC is a public/private partnership of representatives from government, academia, and non-profit organizations. The BBC is tasked with investigating threats facing identified target species and developing strategies to restore and protect those species. Hard clams and seagrass were selected as initial restoration targets because of their ecological importance to many other species in the estuary. The BBC established a goal of restoring the hard clam population of Great South Bay to an average density of six clams per square meter of bay bottom by 2020.

Between 2003 and 2005, TNC and members of the BBC established 10 spawner sanctuaries stocked with over 700,000 adult clams in central Great South Bay. TNC partnered with NYS Department of State and the Towns of Brookhaven and Islip to stock sanctuaries on Town-managed properties in western and eastern Great South Bay and improve post-release survival rate of clams grown at Islip Shellfish Hatchery. In 2005, TNC sponsored a group of high school students who raised 100,000 seed clams to supplement sanctuaries, and plans to expand this program through a proposed partnership among NYS DOS, the Town of Brookhaven, and Western Suffolk County BOCES. TNC is also working to create shellfish nurseries adjacent to Fire Island and has partnered on a pilot project with the Point O'Woods community and Islip Shellfish Hatchery. In the long term, TNC and the BBC hope to foster estuary-wide shellfish restoration and management that support adequate shellfish abundance to maintain healthy ecosystem function and sustainable harvest levels.

NEXT STEPS TO INCREASE HARVEST LEVELS OF SHELLFISH

Reserve Council partners with shellfish hatcheries and grow-out facilities will consider and plan expansions to increase the number of shellfish that can be seeded for the purpose of eventual harvest.

Reserve Council partners will identify additional shellfish spawner sanctuaries based on feasibility assessments.

Reserve Council partners will promote expansion of aquaculture training programs in the Reserve to increase the number of volunteers participating in production of shellfish to seed south shore bays and tidal portions of tributaries.

